

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

Claim 1 (Currently Amended) An electric operation apparatus comprising:

a high-frequency current generating means for delivering high-frequency output power with which high-frequency current is conducted to a living tissue for the purpose of remedy;

an output changing means for changing high-frequency output power that is delivered by said high-frequency current generating means; and

a control means for controlling the output changing means so that high-frequency output power is delivered intermittently to said tissue over a plurality of time intervals (n), said control means calculating a change in the impedance (ΔZ_n) offered by a living tissue during each application delivery interval n, and comparing a value $\Delta Z_n/Z_{sn}$, where Z_{sn} is a measured tissue impedance offered at the start of the nth delivery interval, against a predetermined value implying completion of coagulation change, wherein if $\Delta Z_n/Z_{sn}$ meets a completion condition, the control circuit stops repetition of continuation and discontinuation of output power delivery, wherein after a first time interval, each successive power delivery interval is of equal to or a shorter time duration than an immediate prior interval to enable tissue coverage over a wide range.

Claim 2 (Original) An electric operation apparatus according to Claim 1, further comprising a coagulated state judging means that judges the coagulated state of the living tissue, wherein said control means controls said output changing means according to the result of judgment made by said coagulated state judging means.

Claim 3 (Original) An electric operation apparatus according to Claim 2, wherein said control means determines based on information transferred from said coagulated state judging means

the timing of discontinuing delivery of high-frequency output power.

Claim 4 (Original) An electric operation apparatus according to Claim 2, wherein said coagulated state judging means includes a detecting means that detects biomedical information of the living tissue, and receives the biomedical information from the detecting means.

Claim 5 (Previously Presented) An electric operation apparatus according to Claim 2, wherein said coagulated state judging means judges the coagulated state of the living tissue according to the biomedical information of the living tissue, the number of intermittent power delivery intervals, or both the biomedical information of the living tissue and the number of intermittent power delivery intervals.

Claim 6 (Previously Presented) An electric operation apparatus according to Claim 2, wherein when said coagulated state judging means judges that coagulation of the living tissue has been completed, said control means controls said output changing means so that said intermittent delivery of high-frequency output power will be terminated.

Claim 7 (Previously Presented) An electric operation apparatus according to Claim 2, wherein said control means controls said output changing means so that said intermittent delivery of high-frequency power over said plurality of time intervals changes the magnitude of high-frequency current conducted with high-frequency output power.

Claim 8 (Original) An electric operation apparatus according to Claim 2, wherein said coagulated state judging means judges the coagulated state of the living tissue from an amount of high-frequency current that is conducted to the living tissue.

Claim 9 (Previously Presented) An electric operation apparatus according to Claim 5, wherein said coagulated state judging means judges the coagulated state of the living tissue from biomedical information acquired during each time interval during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued.

Claim 10 (Previously Presented) An electric operation apparatus according to Claim 5, wherein said coagulated state judging means judges the coagulated state of the living tissue from the biomedical information acquired during a plurality of pause periods between said time intervals of high-frequency output power delivery.

Claim 11 (Original) An electric operation apparatus according to Claim 5, wherein said control means determines the level of high-frequency output power according to the result of judgment made by said coagulated state judging means.

Claim 12 (Original) An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing the biomedical information with a predetermined threshold.

Claim 13 (Previously Presented) An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue using at least one of a maximum value and a minimum value of biomedical information acquired during each time interval during which high-frequency output power is delivered or between said time intervals during which delivery of high-frequency output power is discontinued.

Claim 14 (Previously Presented) An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue using an initial value of biomedical information acquired during each time interval during which high-frequency output power is delivered or between said time intervals during which delivery of high-frequency output power is discontinued.

Claim 15 (Previously Presented) An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing biomedical information, which is acquired during each time interval during which high-frequency output power is delivered or between said time intervals during which delivery of high-frequency output power is discontinued, with biomedical information acquired during said first time interval of high-frequency output power delivery or during a first pause period thereafter.

Claim 16 (Previously Presented) An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of a maximum value and a minimum value of biomedical information, which are acquired during each time interval during which high-frequency output power is delivered or between said time intervals during which delivery of high-frequency output power is discontinued, with at least one of a maximum value and a minimum value of biomedical information that are acquired during said first time interval of high-frequency output power delivery or during a first pause period thereafter.

Claim 17 (Previously Presented) An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by

comparing at least one of a maximum value and a minimum value of biomedical information, which are acquired during each time interval during which high-frequency output power is delivered or between said time intervals during which delivery of high-frequency output power is discontinued, with at least one of a maximum value and a minimum value of biomedical information that are acquired during said first time interval of high-frequency output power delivery or during a first pause period thereafter.

Claim 18 (Previously Presented) An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of biomedical information acquired at the start of each time interval during which high-frequency output power is delivered and biomedical information acquired between said time intervals during which delivery of high-frequency output power is discontinued with at least one of biomedical information acquired at the start of said first time interval of high-frequency output power delivery and biomedical information acquired during a first pause period thereafter.

Claims 19 – 22 (Canceled).

Claim 23 (Currently Amended) An electric operation apparatus comprising:

- a high-frequency current generating means for delivering high-frequency output power with which high-frequency current is conducted to a living tissue for the purpose of remedy;

- an output changing means for changing high-frequency output power between first and second levels that is delivered by said high-frequency current generating means; and

- a control means for controlling said output changing means so that high-frequency output power of the first level and high-frequency output power of the second level different from the first level will be delivered alternately to said tissue over a plurality of time intervals

(n), said control means calculating a difference in the current value (ΔI) conducted by a living tissue between the initial current value (I_S) conducted by a living tissue during each application of output power at the second level with the final current value I_E conducted by said living tissue during an immediately preceding delivery period of the output power of the second level, and comparing a value $\Delta I/I_S$ against a predetermined value implying completion of coagulation change, wherein if $\Delta I/I_S$ meets a completion condition, the control circuit stops said alternate delivery of high-frequency output power at the first and second levels, wherein after a first time interval, each successive interval is of equal to or a shorter time duration than an immediate prior interval to enable tissue coverage over a wide range.

Claim 24 (Original) An electric operation apparatus according to Claim 23, wherein: said control means controls said output changing means so that: if high-frequency current conducted with high-frequency output power of the first level meets a first condition, high-frequency output power of the second level will be delivered; and if the high-frequency current meets a second condition, high-frequency output power of the first level will be delivered.

Claim 25 (Original) An electric operation apparatus according to Claim 24, wherein said control means controls said output changing means so that high-frequency output power of the first level and high-frequency output power of the second level will be delivered alternately in order to thus change the magnitude of high-frequency current conducted with output power.

Claim 26 (Original) An electric operation apparatus according to Claim 24, further comprising a coagulated state judging means that judges the coagulated state of the living tissue, wherein said control means controls said output changing means according to the result of judgment

made by said coagulated state judging means.

Claim 27 (Original) An electric operation apparatus according to Claim 26, wherein said control means delivers high-frequency output power of the second level according to the result of judgment made by said coagulated state judging means.

Claim 28 (Previously Presented) An electric operation apparatus according to Claim 26, wherein said coagulated state judging means judges the coagulated state of the living tissue from biomedical information of the living tissue, the number of intermittent delivery intervals of output power of the first level and the number of intermittent delivery intervals of output power of the second level, or both the biomedical information and the numbers of intermittent delivery intervals.

Claim 29 (Original) An electric operation apparatus according to Claim 26, wherein when said coagulated state judging means judges that coagulation of the living tissue has been completed, said control means controls said output changing means so that alternation of high-frequency output power of the first level and high-frequency output power of the second level will be terminated.

Claim 30 (Original) An electric operation apparatus according to Claim 27, wherein high-frequency output power of the second level does not substantially raise the temperature of the living tissue.

Claim 31 (New) The electric operation apparatus as claimed in Claim 1, wherein $\Delta Z_n = Z_{En} - Z_{Sn}$, where Z_{En} is a measured impedance calculated at the end of a pause period after the n th delivery interval when high frequency output power is not delivered.

Claim 32 (New) The electric operation apparatus as claimed in Claim 1, wherein $\Delta Z_n = Z_{En} - Z_{Sn+1}$, where Z_{Sn+1} is a measured tissue impedance calculated at the start of a delivery interval succeeding the pause period when high frequency output power is not delivered.